

### **REMARKS/ARGUMENTS**

Reconsideration of this application is requested. Claims 1-15 and 17-24 are in the case.

#### **I. ELECTION/RESTRICTION**

The election of Group IV, claims 15-24, is affirmed. Claims 1-14 are withdrawn from further consideration.

#### **II. SPECIFICATION**

The specification has been objected to for the reasons stated on pages 2 and 3 of the Action. In response, a new Abstract is submitted herewith, and the specification has been amended to include customary headings. No new matter is entered.

#### **III. CLAIM OBJECTIONS**

Claim 15 has been objected to because of the phrase "wherein the pre-expanded beads are expandable and in particular capable of subsequent expansion without the addition of a fresh quantity of blowing agent". The Action asserts that while the phrase in question is taken almost word for word from the specification (page 13, lines 8-10), there is allegedly no disclosure as to how this might occur.

In response, no indefiniteness arises with regard to the quoted statement. Pre-expanded beads have a particular bulk density. If these same beads are used to fill a mold and then heated, any residual blowing agent will act upon the beads to expand them into the voids between the substantially spherical beads. In other words, the

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expanded beads occupy a greater volume than the pre-expanded beads but retain a bulk density that is substantially the same. There is therefore no indefiniteness.

Withdrawal of this objection is respectfully requested.

#### **IV. THE FORMAL REJECTION**

Claims 19, 20, 22, and 24 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, the narrower statements of range/limitations in claims 19, 20, 22 and 24 have been canceled without prejudice, while retaining the broadest range/limitation in each. Withdrawal of this rejection is respectfully requested.

#### **V. THE ANTICIPATION/OBVIOUSNESS REJECTION**

Claims 15 and 18-24 are rejected under 35 U.S.C. 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as allegedly obvious over Berghmans (US 6,538,042). The rejection is respectfully traversed.

Claim 15 is directed to pre-expanded beads having a bulk density chosen from a range of from 40 to 190 g/l and containing by weight (a) 100 parts of a polymer of styrene, (b) from 0.5 to less than 3.0 parts of at least one blowing agent and (c) from 0 to 0.4 part of at least one plasticising agent. The pre-expanded beads are expandable and in particular capable of subsequent expansion without the addition of a fresh quantity of blowing agent.

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Berghmans does not anticipate or render obvious the presently claimed invention. The Action asserts that Berghmans discloses, amongst other things, "pre-expanded beads having a bulk density chosen from a range of from 40 to 190 g/l (a bulk density of 125kg/m<sup>3</sup>" column 9, line 32). However, this reference to a bulk density is in relation to the **expanded** particles. The pre-expanded particles in the same Example 4 have a bulk density of 350 kg/m<sup>3</sup> which is significantly removed from the range claimed in claim 15 (i.e., 40-190 g/l).

By way of explanation, it would be a reasonable assumption that bulk density of the expanded particles in Example 4 is significantly lower than the pre-expanded particles because the steam expansion did not take place in a (confined) mold. It would also be a reasonable assumption that there will be little or no blowing agent in the expanded particles of Example 4.

In any event, there is no disclosure in Berghmans of polystyrene beads having "a bulk density chosen from a range of from 40 to 190 g/l" in addition to containing "from 0.5 to less than 3.0 parts of at least one blowing agent", let alone any disclosure of pre-expanded beads having the same characteristics. Where the amount of blowing agent is disclosed in Berghmans, it is in relation to pre-expanded polystyrene beads having a bulk density far in excess of the claimed range. Thus, the claimed invention is clearly not anticipated by Berghmans.

The claimed invention is also not suggested by Berghmans. Thus, the claimed (medium density) pre-expanded polystyrene beads are used to manufacture medium-density expanded polystyrene which exhibit, in particular, an excellent compromise between a uniform medium density and very good compressive, bending and pullout

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strengths (see page 5, lines 2-11). One of ordinary skill would not have appreciated this based on the Berghmans disclosure.

For all of the above reasons, Berghmans does not anticipate or render obvious the presently claimed invention. Withdrawal of the anticipation/obviousness rejection based on Berghmans is respectfully requested.

#### VI. THE OBVIOUSNESS REJECTION

Claim 17 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Berghmans and further in view of Paleja (US 5,686,497). That rejection is respectfully traversed.

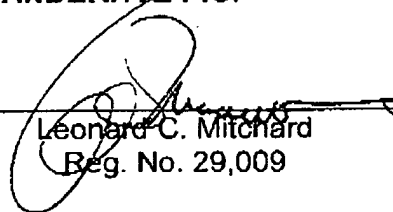
At the outset, it is noted that claim 17 is dependent on claim 15. As a result, claim 17 incorporates all of the claimed features of claim 15 which are not disclosed or suggested by Berghmans for the above-discussed reasons. Claim 17 is therefore not suggested by Berghmans when taken alone or in combination with Paleja. Withdrawal of the obviousness rejection is accordingly respectfully requested.

Favorable action is awaited.

Respectfully submitted,

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